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FRUIT INSECT INVESTIGATIONS
7-23-54 PLANT INDUSTRY STATION
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VOL.5 No. 8

FEBRUARY 25, 1955

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FRUIT INSECTS SECTION

Cooperative
ECONOMIC INSECT REPORT

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UNITED STATES DEPARTMENT OF AGRICULTURE

AGRICULTURAL RESEARCH SERVICE

PLANT PEST CONTROL BRANCH

ECONOMIC INSECT SURVEY SECTION

The Cooperative Economic Insect Report is issued weekly as a service to American Agriculture. Its contents are compiled from information supplied by cooperating State, Federal, and industrial entomologists and other agricultural workers. In releasing this material the Branch serves as a clearing house and does not assume responsibility for accuracy of the material.

Reports and inquiries pertaining to this release should be mailed to:

Economic Insect Survey Section
Plant Pest Control Branch
Agricultural Research Service
United States Department of Agriculture
Washington 25, D. C.

Volume 5 February 25, 1955 No. 8

COOPERATIVE ECONOMIC INSECT REPORT

Highlights of Insect Conditions

Light infestation of ARMYWORM at Baton Rouge, Louisiana. Reports indicate some moth activity in Florida, Texas and Arkansas earlier this year. (page 153).

A specimen of POTATO LEAFHOPPER taken at Baton Rouge, Louisiana, February 13. (page 153).

POTATO PSYLLID abundant at Tempe, Arizona. (page 154).

VEGETABLE WEEVIL appearing in tobacco beds earlier than usual in South Carolina. (page 154).

IPS BEETLE outbreak on pine in several North Carolina counties. (page 155).

FOREST TENT CATERPILLAR infestation predictions for 1955 in Wisconsin (map). (after page 156).

LIGHT TRAP collections at St. Joseph, Louisiana, 1954. (page 157).

GRASSHOPPER and MORMON CRICKET outlook for 1955. (page 158).

SURVEY METHODS for western bean cutworm (page 159) and rice water weevil (page 160).

* *

Reports in this issue are for the week ending February 18, 1955, unless otherwise designated.

WEATHER FOR THE WEEK ENDING FEBRUARY 21, 1955

The winter's worst blizzard which swept across the Central and Northern Rockies and Upper Plains featured the week's weather. Near zero temperatures, glaze, sleet, heavy snow and strong winds necessitated heavy feeding of livestock and in some areas either delayed or stalled transportation on the 18th and 19th. Snow fall of 8-14 inches in central and eastern South Dakota and sections of adjacent states was drifted by 40-70 mile per hour winds, blocking roads and highways.

A strong low pressure area over the Southwest on the 18th was responsible for one of Arizona's worst dust storms in many years. A cold wave hit the far Southwest the next day and by the end of the period mimima in Arizona had dropped to 31° at Yuma and 23° at Tucson. Several sections in the Northern Pacific area reported the lowest temperatures thus far this winter. In the Atlantic States seasonally mild temperatures prevailed and precipitation was light except in New England where heavy rains and snows occurred on the 17th.

Drought continued in western Texas, eastern New Mexico, the Oklahoma Panhandle and southwestern Kansas. Some beneficial moisture fell in western Kansas and eastern Colorado. Precipitation was sufficient to maintain ample surface moisture from the eastern portion of the Great Plains to the Atlantic Coast. Weekly totals exceeded 2 inches over parts of Missouri, Arkansas, Louisiana, Mississippi and Tennessee and over 1 inch in nearly all of the central and lower Mississippi Valley and much of the Ohio Valley.

The heavy snow fall in northern New England on the 17th increased snow depths at some stations by more than 20 inches. In Maine, Ft. Kent reported 58 inches and Greenville 50 inches of snow on the ground at the end of the period. Elsewhere in the East depths decreased and the cover receded. This was also true as far West as the Upper Mississippi Valley with the ground now bare in Ohio, Indiana, Illinois and eastern Iowa. Depths increased in the Northern Plains and Rocky Mountains generally by several inches, but decreased in the Sierra Nevada and Cascade Mountains. (Summary Supplied by U. S. Weather Bureau).

CEREAL AND FORAGE INSECTS

GREENBUG (Toxoptera graminum) - TEXAS - Light, medium to heavy widespread infestation on wheat in Swisher and Hale Counties. Three fields in Hale County average 2-10 greenbugs per linear foot while three in Swisher County average from 40-60 per linear foot. (Simonds).

A WINTER GRAIN MITE (Penthaleus major) - TEXAS - Medium to heavy spotted infestation on small grains in Dallas, Collin, Denton and Falls Counties. Damage has decreased in many fields during past month, but has increased in a few spotted areas. (Davis, Garner).

ARMYWORM (Pseudaletia unipuncta) - LOUISIANA - Light infestations of early instars at Baton Rouge. (Newsom).

CUTWORMS AND ARMYWORMS - TEXAS - Light local infestations on oats in Matagorda County. One field in Matagorda County averaged 2 cutworms and 1 armyworm per square foot. (Smith).

YELLOW CLOVER APHID (Myzocallis trifolii) - CALIFORNIA - Very light damage in Imperial Valley alfalfa, light to heavy in San Bernardino County near Mojave. Destroyed several plantings of young alfalfa in Riverside County. (Coop. Ins. Pest Rept., Jan.). ARIZONA - Light infestation at Bonita, new area for Graham County. This aphid has been severe in Duncan Valley, Greenlee County since last November. (Ariz. Coop. Rept.). TEXAS - Light widespread infestation on alfalfa in Hale County. (Simonds).

LEAFHOPPERS (Empoasca sp.) - LOUISIANA - Records for this year for Empoasca sp. at Baton Rouge are as follows: Three females in 200 sweeps from white clover January 7. Two females January 2 and two January 5 in mercury vapor light trap. Twenty-one females and 2 nymphs in 200 sweeps from mixed burclover and white clover. Three females and one male E. fabae in 300 sweeps from white clover February 13. (Newsom).

CRANBERRY GIRDLER (Crambus topiarius) - WASHINGTON - The sod webworm reported damaging creeping red fescue and Merion bluegrass seed fields near Spokane (CEIR 4(41):919) was determined by H. W. Capps as above species. (Johansen).

CLOVER LEAFHOPPER (Aceratagallia sanguinolenta) - VIRGINIA - Adults and nymphs observed in alfalfa seedings and grain fields of Montgomery County on warm day. (Morris).

FRUIT INSECTS

CLOVER MITE (Bryobia praetiosa) - CALIFORNIA - Largest number of adults and eggs in years in many pear orchards in Mendocino County. Infestations on almonds in Butte County warrants spraying. (Coop. Ins. Pest Rept., Jan.).

OLIVE SCALE (Parlatoria oleae) - CALIFORNIA - Severe infestations in almond orchards in Merced County during January. (Coop. Ins. Pest Rept.).

CALIFORNIA RED SCALE (Aonidiella aurantii) - CALIFORNIA - Infestations ranged up to heavy in parts of San Bernardino County during January. Light in Orange County citrus. (Coop. Ins. Pest Rept.).

CITRUS BUD MITE (Aceria sheldoni) - CALIFORNIA - Heavy infestations in coastal lemon orchards in Santa Barbara County. (Coop. Ins. Pest Rept., Jan.).

WOOLLY APPLE APHID (Eriosoma lanigerum) - WASHINGTON - Living nymphs no longer found on sucker growth of apples at Pullman during first week of February. Lowest temperature in January was 15 degrees on 14, 15 and 21. (Johansen).

TRUCK CROP INSECTS

POTATO PSYLLID (Paratrioza cockerelli) - ARIZONA - Abundant on Lycium at Tempe. Abundance of adults indicates a psyllid population as great as or greater than last year. (Ariz. Coop. Rept.).

VEGETABLE WEEVIL (Listroderes costirostris obliquus) - TEXAS - Heavy local infestation on turnip in Brazoria County. (Cozart). SOUTH CAROLINA - Larvae appearing in tobacco plant beds in Dillon County. This is unusually early for the pest to appear in plant beds. (Allen).

A GALL APHID (Pemphigus populi-transversus) - ALABAMA - Heavy infestation on roots of turnips in southeastern area. Approximately 1,000 acres infested. (Arant).

A GELECHIID (*Aristotelia disconotella*) - VIRGINIA - Larvae found in crowns of strawberry plants in Montgomery County November 5, 1954. Identified by H. W. Capps. (Ames).

ARTICHOKE PLUME MOTH (*Platyptilia carduidactyla*) - CALIFORNIA - Damage ranging up to 30 percent in Monterey County. (Coop. Ins. Pest Rept., Jan.).

POTATO TUBERWORM (*Gnorimoschema operculella*) - CALIFORNIA - Moderate infestations in potatoes in Alameda County during January. (Coop. Ins. Pest Rept.).

FOREST, ORNAMENTAL AND SHADE TREE INSECTS

BARK BEETLES - NORTH CAROLINA - *Ips calligraphus*, *I. grandicollis*, *I. avulus*-Serious outbreak in Anson, Union, Stanly and Cabarrus Counties with hardly a pine stand in Union County that does not have at least a few beetle-killed trees. (Scheer).

A WAX SCALE (*Ceroplastes ceriferus*) - VIRGINIA - Heavy infestation in Norfolk area damaging several host species. (Morris).

INSECTS AFFECTING MAN AND ANIMALS

NORTHERN FOWL MITE (*Bdellonyssus sylviarum*) - PENNSYLVANIA - Very heavy infestation causing injury to young turkeys in Clearfield County in January. Determined by E. W. Baker. (Adams). NORTH CAROLINA - Severe infestation on poultry farm at Raleigh. (Farrier).

CHICKEN MITE (*Dermanyssus gallinae*) - NORTH CAROLINA - Rather severe local infestation on laying hens in Raleigh. (Farrier).

CATTLE LICE - UTAH - Abundant on many beef cattle in Cache County. (Knowlton, Tueller).

STORED-PRODUCT INSECTS

GRANARY WEEVIL (*Sitophilus granarius*) - CALIFORNIA - Heavy infestation in barley in Colusa County. (Coop. Ins. Pest Rept., Jan.).

COWPEA WEEVIL (Callosobruchus maculatus) - OREGON - Black-eyed peas in storage at Portland found infested. (Ritcher).

MISCELLANEOUS INSECTS

A LEAF-FOOTED BUG (Leptoglossus sp.) - ARIZONA - Abundant around buildings at Congress. The species was very abundant in this area last fall. (Ariz. Coop. Rept.).

WHITE-MARKED SPIDER BEETLE (Ptinus fur) - MARYLAND- Numerous adults in closet of home in Baltimore County. (U. Md., Ent. Dept.).

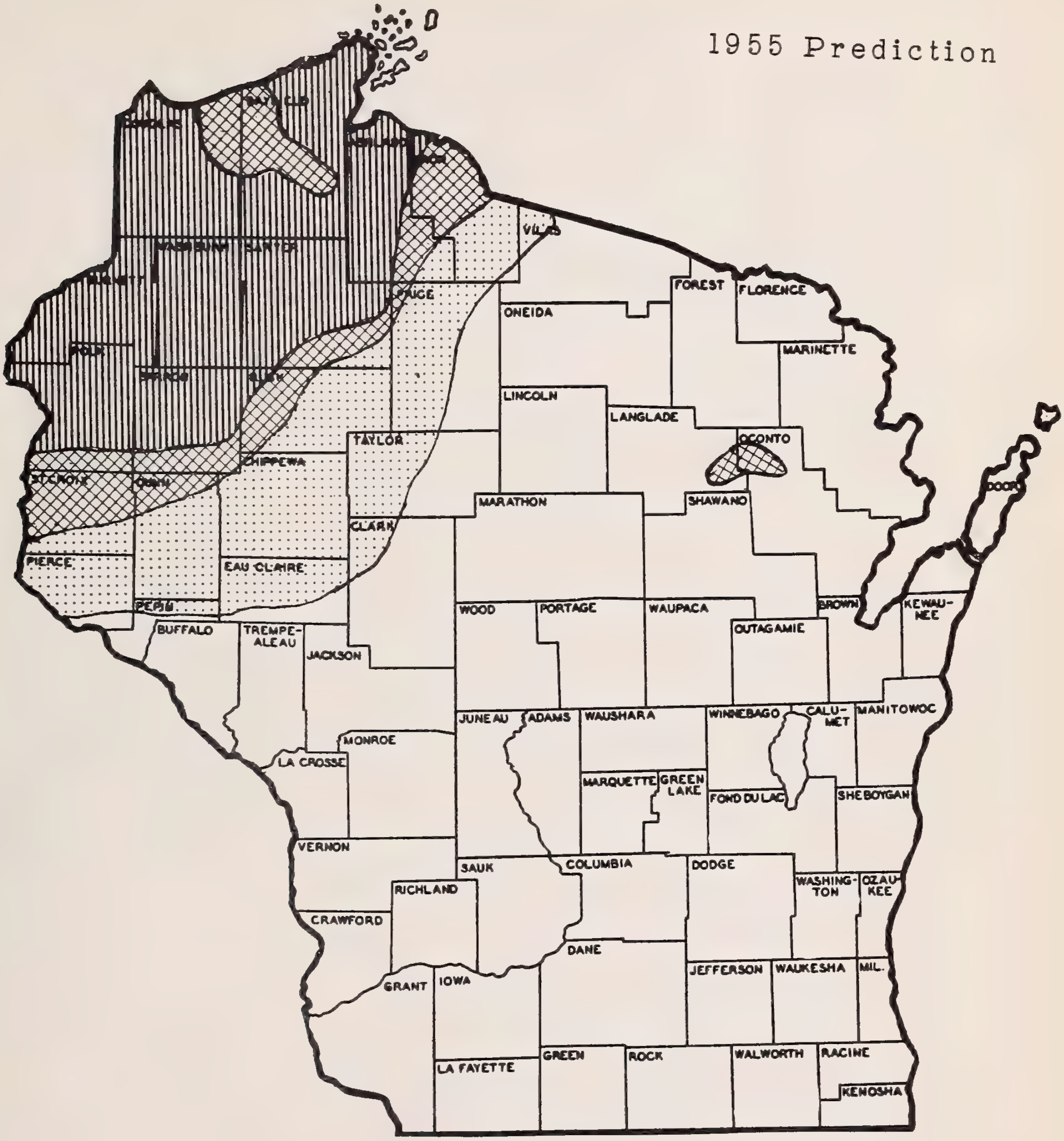
SOUTHERN LYCTUS BEETLE(Lyctus planicollis) - PENNSYLVANIA- Found infesting hickory ax handles in a hardware store in Philadelphia. (Menusan).

RECENT IMPORTANT INTERCEPTIONS AT PORTS OF ENTRY

Of interest recently was the unusual interception of living termites, identified as Kalotermes flavicollis (Fabr.), with quinces in ship's baggage from Italy at New York, N. Y. (Ramsay). This insect is considered a vineyard and fruit tree pest in the Mediterranean area. It is found ordinarily in old tree stumps or in the trunks of dead or dying trees but will attack grape vines or fruit trees that are weakened by age, diseases, insect attacks, heavy pruning or neglect. Weak vine stocks are most liable to infestation when the leaf shoots appear in the spring. Attack is limited to parts of the vine or tree that are nearly dried up. Healthy vines are practically immune. Occasional damage to buildings is also caused by this termite, but it is not generally a house or timber infesting species. It has been reported from France, Spain, Portugal, Italy, Yugoslavia, Algeria, Egypt, Syria, and Caucasia. It is not known to be present in the United States. (Compiled --Plant Quarantine Branch).

FOREST TENT CATERPILLAR INFESTATION IN WISCONSIN

1955 Prediction



Degrees of infestations

▥ Heavy

▩ Medium

░ Light

ANTICIPATED AREAS & DEGREES OF INFESTATIONS FOR 1955 BASED ON A WINTER EGG BAND SURVEY

WISCONSIN CONSERVATION DEPARTMENT

Light Trap Records at St. Joseph, Louisiana - 1954

Due to the interest in light traps as a survey instrument the following summary is being shown. These figures are from the St. Joseph Louisiana trap, one of several used in that State. Although many insects were taken, the records listed are on some of the more important lepidopterous species. The trap was of the mercury vapor type.

Date	Pseudaletia unipuncta	Agrotis ypsilon	Heliothis armigera	Feltia subterranea	Peridroma margaritosa
2/21-27	3	1	0	0	3
2/28-3/6	0	0	0	0	0
3/7-13	97	1	1	0	35
3/14-20	59	6	1	1	17
3/21-27	313	39	88	4	44
3/28-4/3	263	36	64	10	28
4/4-10	127	31	17	11	42
4/11-17	27	11	14	10	13
4/18-24	8	7	1	18	22
4/25-5/1	11	8	9	10	50
5/2-8	30	1	9	7	37
5/9-15	79	10	23	18	56
5/16-22	85	1	25	20	26
5/23-29	24	0	15	3	24
5/30-6/5	0	0	1	0	0
6/6-12	0	0	1	1	0
6/13-19	0	0	0	3	0
6/20-26	0	0	5	1	0
6/27-7/3	5	1	1	14	0
7/4-10	4	1	34	18	2
7/11-17	23	2	61	58	13
7/18-24	2	1	252	64	4
7/25-31	9	3	353	28	2
8/1-7	13	3	329	37	4
8/8-14	220	1	402	22	0
8/15-21	678	8	736	37	1
8/22-28	486	0	781	37	0
8/29-9/4	2479	25	665	21	0
9/5-11	1044	50	283	25	1
9/12-18	650	50	492	45	5
9/19-25	599	14	399	28	0
9/26-10/2	283	19	185	43	1
10/3-9	57	5	55	59	1
10/10-16	138	1	10	42	1
10/17-23	309	16	24	5	0
10/24-30	733	15	20	10	0

(Submitted by E. C. Burns)

Grasshopper and Mormon Cricket Outlook for 1955

Grasshoppers

Preliminary estimates indicate that in 1955 some 6,000,000 acres of rangeland may require grasshopper control in Arizona, California, Colorado, Kansas, Idaho, Montana, Nebraska, Nevada, New Mexico, Oregon, Oklahoma, Texas, Utah, Washington, and Wyoming. (see map following page).

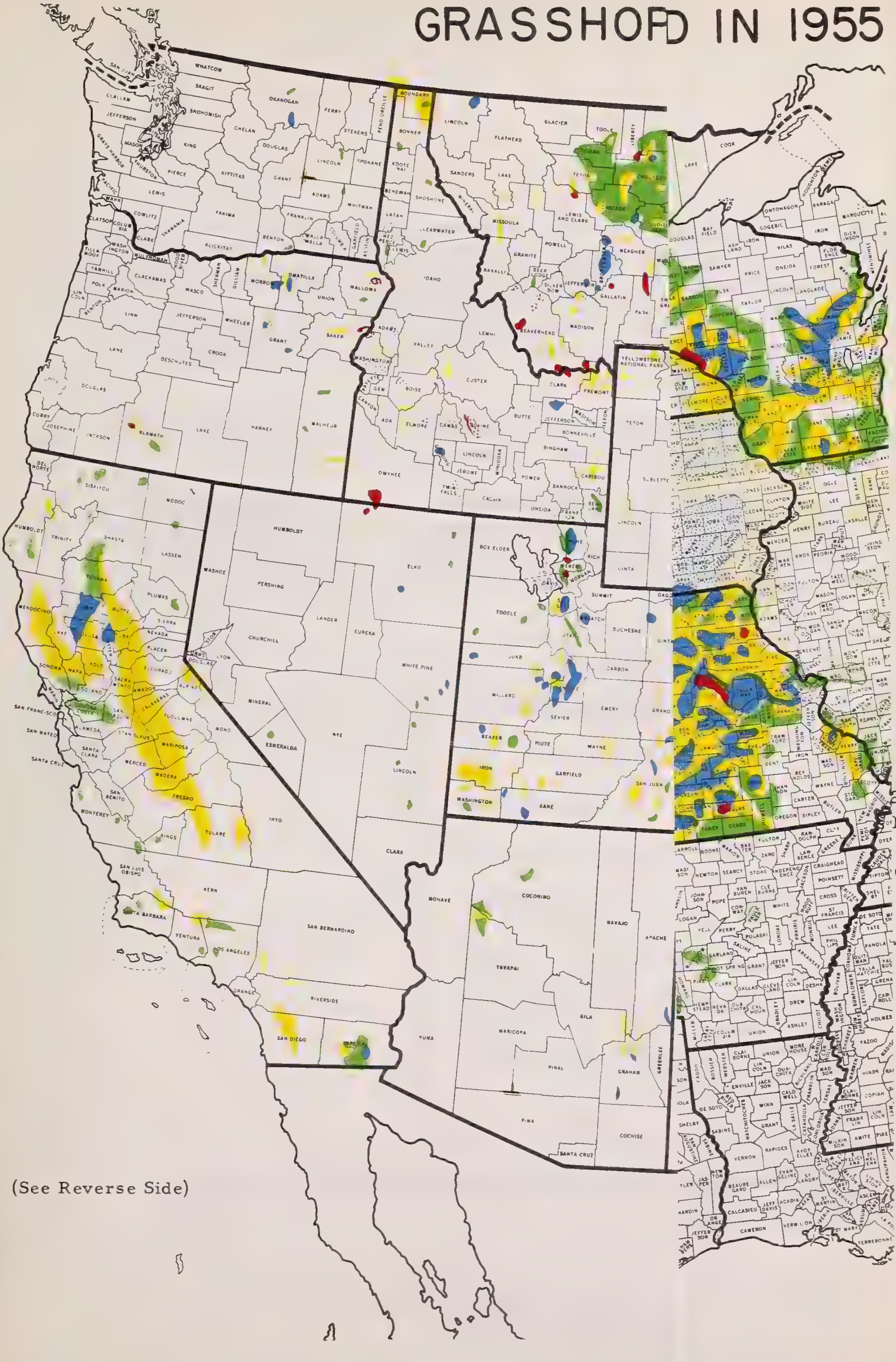
Grasshopper infestations increased in cropland areas in many of the Mid-western States and in some of the Western States served by the Grasshopper Control Project. Surveys in 1954 showed that the greatest increase in grasshopper populations took place in northern Indiana, southern Wisconsin, southern Iowa, the eastern portions of Nebraska and Kansas, Minnesota, Missouri, and Oklahoma, and in parts of South Dakota, Texas, and Utah.

Mormon Crickets

Mormon cricket infestations spread little, and the need for control should be less in 1955 than it was in 1954. The greatest increase in infestations occurred in Montana. Small areas in Colorado, Idaho, Nevada, Utah, and Wyoming will warrant control attention. The total area to be baited in the six states probably will not exceed 83,200 acres.

(A map on Mormon cricket infestations expected in 1955 will be carried in a later issue of CEIR). (Grasshopper Control Project).

GRASSHOPD IN 1955



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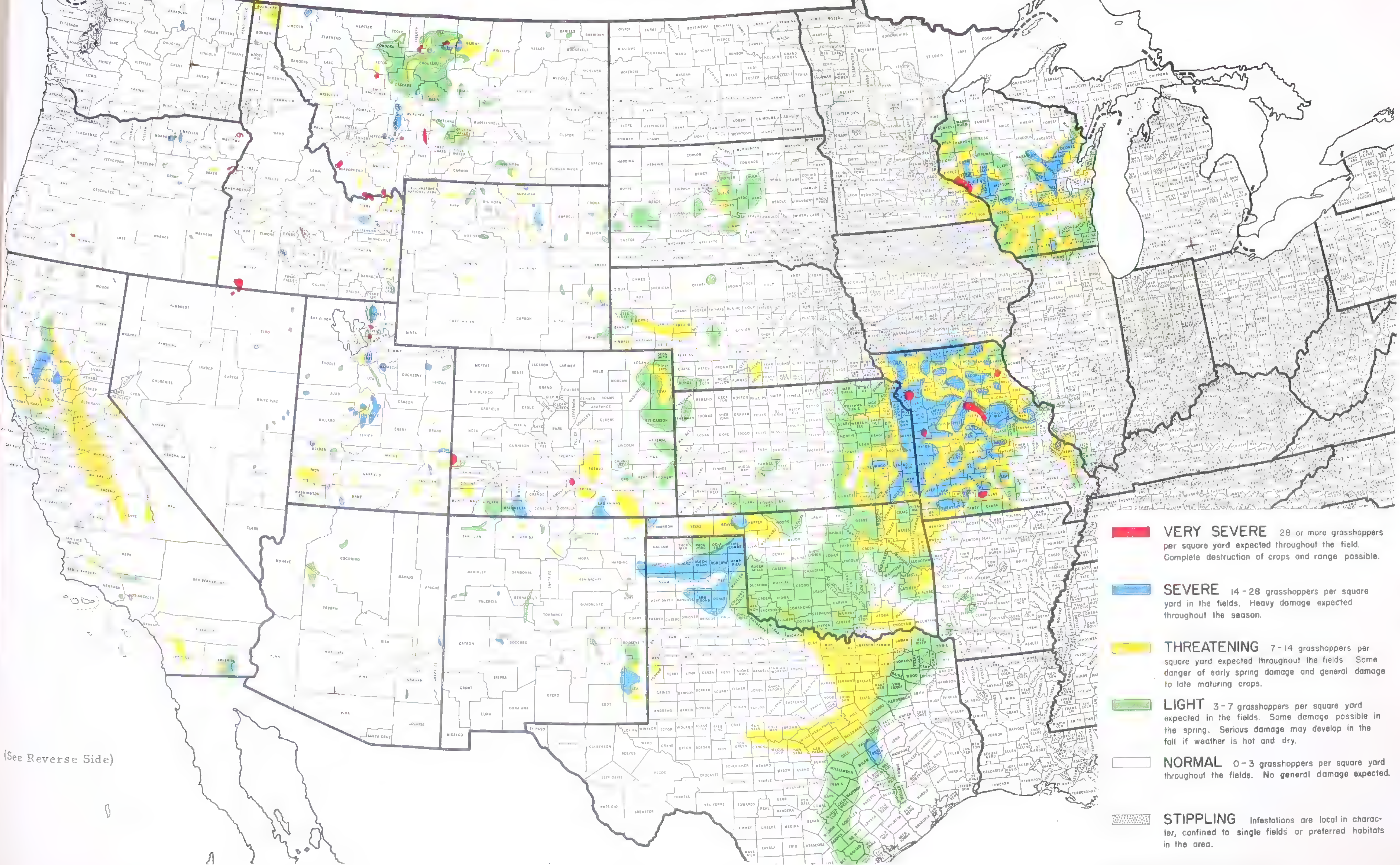
GRASSHOPPER INFESTATION EXPECTED IN 1955

FROM THE 1954 SURVEYS



🟥 **VERY SEVERE** 28 or more grasshoppers per square yard expected throughout the field. Complete destruction of crops and range possible.

🟦 **SEVERE** 14 - 28 grasshoppers per square yard in the fields. Heavy damage expected throughout the season.

🟨 **THREATENING** 7 - 14 grasshoppers per square yard expected throughout the fields Some danger of early spring damage and general damage to late maturing crops.

🟩 **LIGHT** 3 - 7 grasshoppers per square yard expected in the fields. Some damage possible in the spring. Serious damage may develop in the fall if weather is hot and dry.

☐ **NORMAL** 0 - 3 grasshoppers per square yard throughout the fields. No general damage expected.

▨ **STIPPLING** Infestations are local in character, confined to single fields or preferred habitats in the area.

UNITED STATES DEPARTMENT OF AGRICULTURE, ARS, PLANT PEST CONTROL BRANCH, GRASSHOPPER CONTROL PROJECT, DECEMBER 31, 1954

(See Reverse Side)

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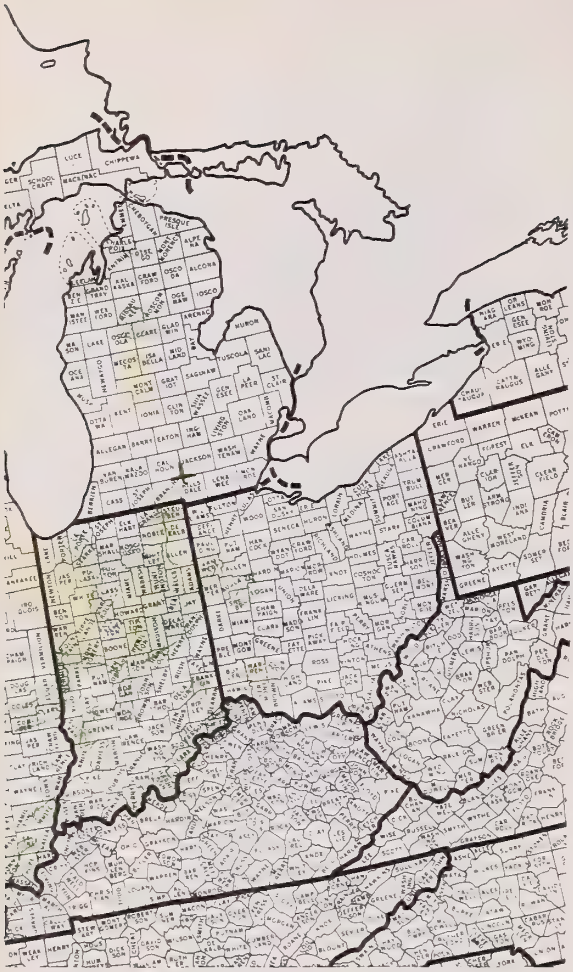

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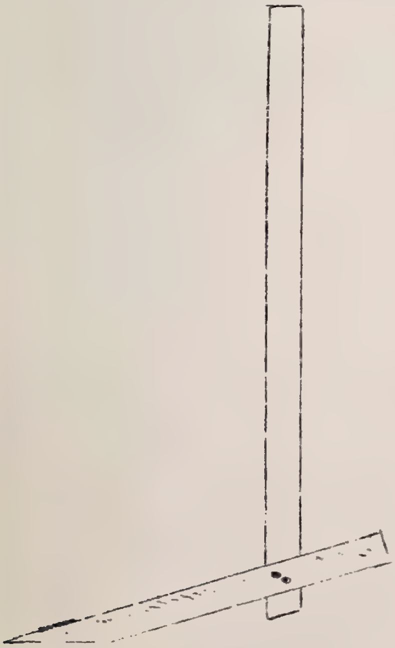
SURVEY METHODS

Western Bean Cutworm (Loxagrotis albicosta)

The examination of beanfields for western bean cutworm should first be directed toward the detection of holes in the pods by the larvae and, second, if they are found, toward the cutworm itself. Since other insects eat similar holes in the pods, the larvae must be found for positive identification of its presence. If the beans have not been cut, an examination should be made of 100 feet of row located in the center of the field and 100 feet of row located near the approximate center of each quarter of the field, involving the examination of a total of 500 feet of row per field. To facilitate turning the vines and exposing the pods, a vine lifter could be used to advantage. (see diagram). The handle is made from 1-5/8 x 3/4" lumber and is 39 inches long. The blade is made from 1-1/4 x 3/8" lumber and is 17 inches long. If holes are noted in the bean pods, the plants should be slapped so as to knock any larvae that may be on the plants into the middle of the row. The soil under the plants should also be examined for these larvae, since they often burrow into the soil around the plants. If the bean plants have been cut and windrowed or shocked, an examination should be made of 20 feet of windrow in the center of the field and 20 feet located near the approximate center of each quarter of the field, involving the examination of 100 feet of row per field. In examining the vines, they should be raised, shaken, turned, and placed to one side. Larval pellets are dropped on the soil-surface, and when they are observed either under the plants or windrows, the larvae are generally readily found. For the distribution and description of the insect see the article by J. L. Hoerner, "The cutworm Loxagrotis albicosta on beans," Jour. Econ. Ent. 41(4): 631-635, 1948. (J. R. Douglass).



UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL RESEARCH SERVICE
Plant Pest Control Branch
Grasshopper Control Project

TO COOPERATORS:

This map is based upon the results of grasshopper adult and egg surveys made during the late summer and fall of 1954. Surveys are basic in grasshopper control operations. They provide necessary advance information to farmers, ranchers, State, and Federal agencies concerned and are performed, with participating States, by the Grasshopper Control Project, Plant Pest Control Branch, Agricultural Research Service. Adult surveys, made in late summer, give the best over-all picture of the situation. They reveal where, how many, and what kinds of grasshoppers infest an area. Egg surveys, performed in the fall, indicate how severe the grasshopper infestation is expected to be. Nymphal surveys, made each spring immediately before the onset of control work, give the final index of 'hopper populations which will require control that field season. The map, "Grasshopper Infestation Expected in 1955",reflects the potential grasshopper problem in the states shown.

In using the survey forecast information, farmers, ranchers, county and state agencies, Federal land management personnel, dealers in insecticides and equipment, and those directly charged with grasshopper control are able to plan and carry out timely, economical and effective control programs.

Apart from crop area grasshopper infestations, which are generally more threatening than they were in 1954 and which infestations farmers will control at their own cost with assistance from Project and State technical personnel, the 1955 rangeland problem is widespread and severe. Some 6,000,000 infested range acres occur in parts of 15 Western States. Work to bring these pests under control will be financed and conducted jointly by interested public agencies and by private owners whose lands are infested. The following table sets out the indicated 1955 rangeland grasshopper problem:

State	Landownership		Total (Acres)	State	Landownership		Total (Acres)
	Private & State	Public Domain			Private & State	Public Domain	
Arizona	150,000	225,000	375,000	New Mexico	545,000	20,000	565,000
California	196,500	22,500	219,000	Oklahoma	500,000	-	500,000
Colorado	885,000	15,000	900,000	Oregon	262,600	27,400	290,000
Idaho	11,500	44,800	56,300	Texas	1,750,000	-	1,750,000
Kansas	93,000	-	93,000	Utah	49,760	115,520	165,280
Montana	640,000	179,000	819,000	Washington	48,450	36,550	85,000
Nebraska	50,000	-	50,000	Wyoming	88,000	113,000	201,000
Nevada	29,500	-	29,500				

Detailed information concerning the grasshopper problem in specific areas or states can be obtained from county agents, State officials, and personnel of the Grasshopper Control Project.

Grasshopper Control Project
Denver Federal Center
Denver, Colorado

Technique For Making Rice Water Weevil Larval Counts

Clumps of rice containing at least five plants, together with the soil surrounding the roots, were removed by hand. All but 5 plants and the excess soil were removed and discarded. Two such samples were taken and placed in a ten-inch cylinder (with sides 12-15 inches high), constructed of sheet iron, the bottom of which was covered with 20-mesh copper screening. The cylinder was then placed in six to twelve inches of water and the roots of the rice clump shaken vigorously in the water within the cylinder, after which the clump was discarded. The larvae that are completely loosened from roots or soil by this treatment float to the surface. The floating larvae were counted and removed by means of a sieve. The cylinder was then shaken vigorously which dislodged additional larvae. These also were counted and removed. This process was continued as long as it brought additional larvae to the surface. In most cases five to eight shakings completed the count. Numerous examinations of the materials remaining in the cylinder or in the clump of rice after this procedure showed that very few larvae were missed other than extremely small larvae capable of passing through the 20-mesh screen. In the taking of data two such samples were taken from each plot. (F. E. Whitehead).

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